

# 'CHEF' MODEL A.700 & A.700D

## INTRODUCTION

### MODEL A.700

The Kenwood "Chef" Model A.700 consists of a cast aluminium body, designed to house the Motor and Gears. Provision is made for the body to hinge backwards and a spring-loaded catch allows it to be locked in the tilted position.

The Mixing Bowl is secured by the location of bayonet slots with lugs on the Pedestal.

Mounted vertically in the Body is a series wound universal motor fitted with a variable speed control. The end of the motor shaft is fitted with a drive pin that engages with a slot in the shank of a spring-loaded Pinion Gear.

Along the top of the Body a train of three-reduction gears is arranged.

The gear housing is grease packed and is enclosed by a top cover which also forms a handle.

A removable Cover Cap encloses the motor output shaft while the Juice Extractor socket is protected by a chromium-plated screw-in plug. The outlet socket at the nose end has a plastic cap held in position by a clamp screw. This screw also holds the various attachments in position. The Top Cover and Body are sealed by a rubber jointing ring, located in a groove around the Body flange.

When the Liquidiser Goblet base is placed in position over the end of the Motor Spindle, the motor drive is disengaged from the pinion and gear train by a decoupling plate which presses down on the rim of the motor drive pinion.

Orbit movement of the rotating beater is obtained through the Planet Hub. An off centre output socket retains the plug-in Beater, Whisk and Dough Hook Attachments.

### MODEL A.700D

The "Chef" Model A.700D is a Double Insulated Machine and need not be earthed. A twin-core cable is, therefore, fitted. These Machines have many parts in common with the original "Chef". The basic construction is the same, the main difference being the Motor and Controller, which have plastic end frames and Drive Pinions.

Many improvements have been introduced on this model, namely, improved Motor Oil Seal and Controller Yoke, nylon Beaker Drive Dog, etc. The layout of Chokes and Resistances also differs from the A.700.

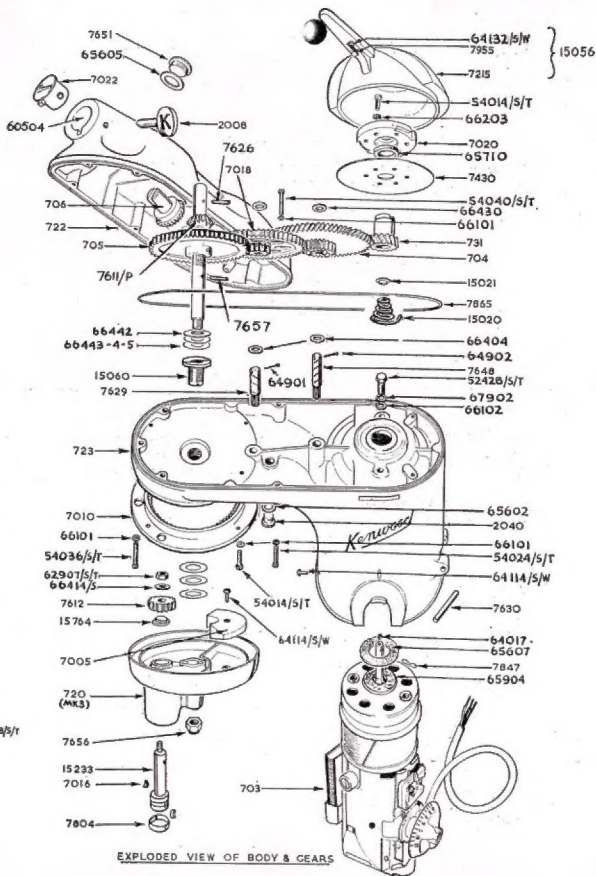
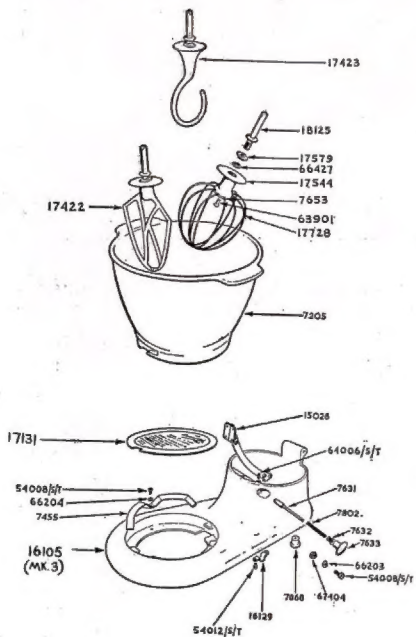
## SPECIFICATION

	Model A.700	Model A.700D
Overall Dimensions (With Mixing Bowl)	14½" x 11" x 13½" high	14½" x 11" x 13½" high
Weight (Including Bowl and Beaters)	23½ lbs. approx.	23½ lbs. approx.
Voltage Ranges (Including current)	200/250V AC/DC (2 amps) 150/175V AC/DC (3 amps) 100/125V AC/DC (4 amps)	200/250V AC/DC (2 amps) 150/175V AC/DC (3 amps) 120/140V AC/DC (4 amps) 100/120V AC/DC (4 amps)
Rating	400 Watts	400 Watts
Finish	High gloss stove enamel. Exterior metal fittings chromium plated. Plastic cover cap, mincer drive cap and control knob	

## LIST OF SERVICE TOOLS

Ring Gear Centralising Jig	T.10
Motor Drive Pin Drill Jig	T.16
Phillips Screw Driver (Large)	T.36
4 BA Box Spanner	T.38
2 BA Box Spanner	K.T.10064
Insulation Pliers (Long Nosed)	T.39
½" x ⅝" Whit. Spanner	T.40
Insulated Screw Driver ⅝"	T.41
2 BA and 4 BA Spanner	T.42
2 BA Allen Key	T.43
4 BA Allen Key	T.44
Service Stand	T.48
Ring Gauge	T.47
Clock Gauge	T.49
Beater Adjusting Jig	T.50
Adjustable Bush Spanner	T.51
Phillips Screwdriver (Small)	T.56
6 BA Box Spanner	T.59
Special ⅜" Whit. Box Spanner	T.60
Beaker Spigot Centralising Jig	T.70
Jig for Fan, Spring and Yoke	T.78
Height Gauge for Motor Shaft	T.100
Tachometer	T.101
Concentricity Gauge	T.103
Assy Tool for Fitting Felt Washer to Drive Pinion	T.104
Allen Key ⅝" A/Flats	T.105
Spigot Centralising Sleeve	T.106
Slip Gauge	T.107
Height Gauge	T.109
Planet Shaft Key	T.115
Control Knob Retainer Tool	Pt. No. 16493
Motor Alignment Jig	K.T.9113

EXPLODED VIEW OF PEDESTAL & BEATERS



EXPLODED VIEW OF BODY & GEARS

# MODEL A.700 GENE L ASSEMBLY

## LIST OF SPARE PARTS

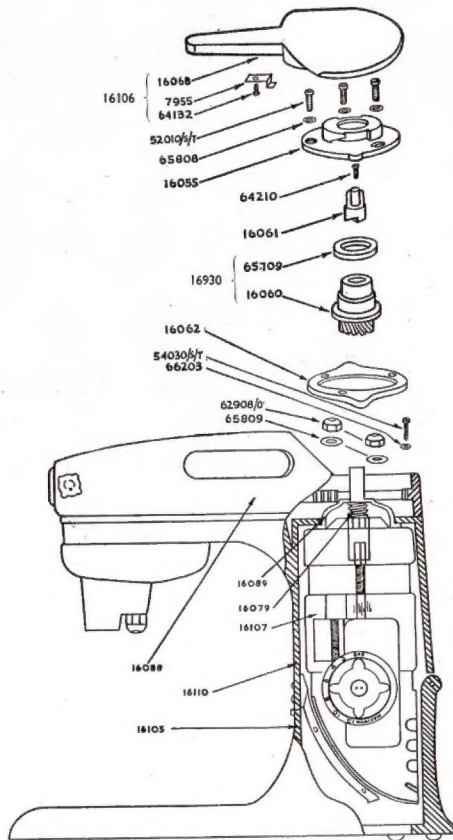
Part No.	No. Off	Description	Part No.	No. Off	Description
703	1	Controller Assembly	66414/S	(was 7841) 1	Washer 1/4" B.S.F.
704	1	Intermediate Gear Assembly	66114	(was 15389) 1	Self-Tapping Screw (Phillips)
705	1	Vertical Drive Shaft Assembly (See index to changes in design for details)	62907/S/T	(was 15519) 1	Nut 1/4" B.S.F. Simmonds Pinnacle "T"
706	1	Output Shaft Assembly	15764	1	Distance Collar
707	1	Stop Pin Assembly Consisting of:	15056	1	Cover Cap Assembly Consisting of:
7631	1	Lock Pin	7215	1	Cover Cap
7632	1	Lock Retainer Bush	7955	1	Cover Spring
7633	1	Lock Pin Knob	64132	(was 9822) 1	Screw (Type "Z" No. 4 x 1/8")
7802	1	Lock Pin Spring	2008	1	Mincer Clamp Screw
17422	(was 709) 1	"K" Beater Assembly Consisting of:	2040	1	Filler Plug
18125	(was 763) 1	Beater Shaft Assembly	16105	Mk. 3 1	Pedestal
17542	(was 7006) 1	"K" Beater	7010	Mk. 1 1	Ring Gear (Suitable for Serial Nos. up to 225,000)
17579	(was 7647) 1	Locknut		Mk. 2 1	Ring Gear (Suitable for Serial Nos. 225,000 onwards)
66427	(was 15731) 1	Washer 1/4" B.S.F.	7018	1	MAZAK Penultimate Gear
17423	(was 710) 1	Dough Hook Assembly Consisting of:	7020	1	Beaker Spigot
18125	(was 768) 1	Beater Shaft Assembly	7022	1	Mincer Drive Cap
17543	(was 7007) 1	Dough Hook	7205	1	Glass-Mixing Bowl
17579	(was 7647) 1	Locknut	7430	1	Base Plate
66427	(was 15731) 1	Washer 1/4" B.S.F.	6710	(was 7432) 1	Felt Washer
17424	(was 711) 1	Whisk Assembly Consisting of:	66404	(was 7434) 4	Washer, Small
18125	(was 768) 1	Beater Shaft Assembly	66430	(was 16370) 4	Washer
17579	(was 7647) 1	Locknut	65602	(was 7436) 1	Washer 21 SWG
66427	(was 15731) 1	Washer 1/4" B.S.F.	66442	(was 7437) A/R	Bearing Washer
17425	(was 769) 1	Hub & Wire Assy. Consisting of:	66443	(was 7438) A/R	Shim .015"
17544	(was 7008) 1	Hub	66444	(was 7439) A/R	Shim .005"
17728	(was 7538) 5	Whisk Wire	66445	(was 7440) A/R	Shim .010"
7653	1	Whisk Hub Plug	66406	(was 7447) A/R	Bearing Washer 16 SWG
63901	(was 7870) 1	Screw 1/4" Whit. x 1/2" C/sk Hd.	16090	1	Bowl Seat Plate (Printed)
16996	(was 717) 1	Spatula	17131	1	Bowl Seat Plate (Plain)
722	1	Top Cover and Bearing Assembly	7455	2	Bowl Seat Spring
723	1	Body Assembly Consisting of:	7630	1	Hinge Pin
7629	1	Gear Stub Shaft	7651	1	Cover Plug
7648	1	Gear Stub Shaft	65605	(was 7652) 1	Washer
15235	1	Body and Bearing (See index to changes in design for details of above assembly)	7656	1	Planet Nut (See section re changes in design)
731	1	Driving Pinion & Bearing Assembly	7657	1	Drive Pin
767	1	Steel Penultimate Gear Assembly	66204	(was 7839) 2	Washer 4 BA Shakeproof (Int.)
15026	1	Stop Quadrant Assembly Consisting of:	64006/S/T	(was 7843) 1	Grub Screw 4 BA x 1/4" long
15022	1	Quadrant Bracket	7847	1	Motor Drive Pin
15024	1	Quadrant Arm	63603	(was 7863) 4	Hammer Drive Screw No. 4 x 1/8"
63411	(was 15025) 1	1/2" x 1/2" Semi-Tubular Rivet	7865	1	Jointing Ring
15967	1	Quadrant Spring	7867	1	Serial Number Name Plate
54008/S/T	1	Screw 4 BA x 1/2" Ch. Hd. St. N.P.L.	66203	5	Rubber Feet
67404	1	Bolt Nut 4 BA St. N.P.L.	7921	12	Washer 4 BA Shakeproof (Ext.)
66203	1	Washer 4 BA Shakeproof (See index to changes in design for details of above assembly)	64017	(was 7957) 1	4 BA Allen Screw 1/4" long
15055	1	Planet Hub Assembly Consisting of:	66101	(was 7986) 7	4 BA Dowty "Seloc" Washer
720	1	Planet Hub and Bearing (See index to changes in design for details of above assembly)	66102	(was 7987) 2	Dowty "Seloc" Washer 2 BA
714	1	Planet Shaft Assembly Consisting of:	64132/S/W	(was 9822) 2	Screw Type "Z" No. 4 x 1/8" long
7016	2	Implement Key	15021	1	Clutch Spring
7804	1	Spring	15060	1	Thrust Collar
15233	1	Planet Shaft and Pin Assembly	15061	2	Mainshaft Adjustable Bush
7005	1	Balance Weight	62308	(was 15064) 1	Adjustable Bush Locknut
7612	1	Planet Gear	64617	(was 15265) 1	Cable Grommet
			64114/S/W		P.V.C. Sleeving 1/4" long 10 mm. bore
					Screw Type "Z" No. 6 x 1/2" Rd. Hd.
			64901	(was 15659) 1	Split Pin 1/4" dia. x 1/2"
			64902	(was 15730) 1	Split Pin 1/4" dia. x 3/4"
			62811	7 lb tin	Grease for Gearbox
			62812	28 lb drum	" " " "

Part No.	No. Off	Description
65607	(was 16011) 1	Motor Oil Seal Washer (Hard) (See section re. changes in design)
65904	(was 16012) 1	Motor Oil Seal Washer (Soft) (See section re. changes in design)
16129	1	Cable Clamp (Single)
67902	(was 1007/2) 2	Washers 2 BA Large
54008/S/T	(was 1000/4/3S) 2	Screw Ch. Hd. 4 BA x $\frac{1}{4}$ " long
54012/S/T	(was 1000/4/5S) 2	Screw Ch. Hd. 4 BA x $\frac{3}{8}$ " long
54014/S/T	(was 1000/4/6S) 10	Screw Ch. Hd. 4 BA x $\frac{7}{16}$ " long
54024/S/T	(was 1000/4/11S) 2	Screw Ch. Hd. 4 BA x $\frac{1}{2}$ " long
54036/S/T	(was 1000/4/17S) 3	Screw Ch. Hd. 4 BA x $1\frac{1}{4}$ " long
54040/S/T	(was 1000/4/19S) 2	Screw Ch. Hd. 4 BA x $1\frac{1}{4}$ " long
52428/S/T	(was 1004/2/4S) 2	Bolts 2 BA Hex. Hd. x $\frac{1}{4}$ " long

#### GENERAL ASSEMBLY A.700D

List of parts NOT interchangeable with A.700. For interchangeable parts see Section A.700

Part No.	No. Off	Description
16055	1	Beaker Spigot
16061	1	Drive Dog
16062	1	Sealing Washer
16079	1	Clutch Spring
16089	1	Oil Seal
16930	1	Drive Pinion Assembly Consisting of:
16060	1	Drive Pinion
65709	(was 16076) 1	Felt Washer
16088	1	Cover Assembly Consisting of:
16059	1	Top Cover
7650	1	Bush
60502	(was 15250) 1	Bearing
15019	1	Mincer Outlet Bush
16106	1	Cover Cap Assembly Consisting of:
16068	1	Cover Cap
7955	1	Cover Spring
64132	(was 9822) 1	Screw
16110	1	Body Assembly Consisting of:
16421	1	Body
15060	1	Mainshaft Adjustable Bush
7648	1	Gear Stub Shaft
7629	1	Gear Stub Shaft
16080	1	Louvre L.H.
16081	1	Louvre R.H.
63608	(was 16434) 4	Hammer Drive Screws
16090	1	Bowl Seat Plate
16105	1	Pedestal
65808	(was 16091) 3	Washer (Spigot)
65809	(was 16220) 2	Washer (Motor)
16283	1	Serial Number Plate
64210	(was 16336) 1	4 BA x $\frac{1}{2}$ " Phillips Ch. Hd. Screw (Nylon)
16107	1	Controller Assembly
18143	1	Cable Clamp
62908/0	(was 16109) 2	2 BA "Nyloc" Nuts
16392	A/R	Anti-Scurling Paste
52010/S/T	(was 1000/2/3) 3	3 BA x $\frac{1}{8}$ " Ch. Hd. Screw
54030/S/T	(was 1000/4/14) 2	4 BA x $1\frac{1}{8}$ " Ch. Hd. Screw



EXPLODED VIEW OF A.700D, SHOWING PARTS NOT INTERCHANGEABLE WITH A.700



## DISMANTLING PROCEDURE

### Model A.700

To service the Kenwood "Chef", first place it in position on Service Stand T.48.

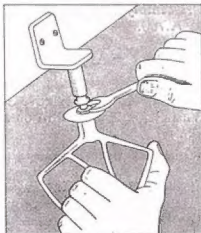
- (1) **Planet Hub Assembly (15055)**  
Remove Planet Nut (62907/S/T) and tap the end of shaft with a *hide* mallet until the Hub drops. Withdraw Planet Hub Assembly from shaft.
- (2) **Ring Gear (7010)**  
(Removal should only be necessary for replacement of Body Casting or the Gear itself.)  
Remove the Screws (54014/S/T) and Washers and take away Ring Gear. Remove Drive Pin (7657) and Shims.
- (3) **Beaker Spigot (7020)**  
Remove Cover Cap (15056). Remove Screws (54014/S/T) and Washers (66203). Take away Spigot, Felt Washer (65710) and lift off Base Plate (7430).
- (4) **Top Cover and Gear Assemblies**  
Remove Screws (54024/S/T), (54036/S/T), (54040/S/T), Washers (66101) and lift off Top Cover (722). Remove Allen Screw (64017) situated in the top of the Motor Drive Shaft, and push out Motor Drive Pin (7847). Lift off Driving Pinion (731), Thrust Collar (15021) and Clutch (15020). Remove Split Pins (64902) and (64901) from the Gear Stub Shafts, and take away Washers (66430). Lift off Intermediate Gear Assembly (704) and remove Washer (66404). Lift off Penultimate Gear (7018) and Vertical Drive Shaft Assembly (705). Take away Washer (66404) from under Penultimate Gear and Thrust Washer (66442) from Vertical Drive Shaft Assembly.
- (5) **Stop Quadrant Assembly (15026)**  
Remove 4 Phillips Screws (64114S/T) open Body and support in horizontal position. Pull out Stop Pin and lift out Stop Quadrant.
- (6) **Stop Pin Assembly (707)**  
Remove Grub Screw (64006/S/T) and withdraw Stop Pin Assembly from Pedestal (7001).
- (7) **Controller Assembly (703)**  
Remove Cable Clamp (16129) and withdraw cable through Grommet (62308). Unscrew Control Knob Retaining Screw (7616). Remove Control Knob (7203), Spring (7483). Remove the two Motor Mounting Bolts (52428/S/T), Dowty Washers (66102), and Plain Washers (67902) which secure the Motor to the Body Casting and remove Controller Assembly (703). Remove Oil Seal Washers (65607) and (65904).
- (8) Should it be required to separate the Body (723) from the Pedestal (7001), remove Hinge Pin (7630).

## DISMANTLING PROCEDURE

### MODEL A.700D

- (1) **Planet Hub Assembly (15055)**  
Procedure as A.700.
- (2) **Ring Gear (7010)**  
Procedure as A.700.
- (3) **Beaker Spigot (16055)**  
Remove Cover Cap (16106). Remove Screws (52010/S/T) with Fibre Washers (65808) and lift off Spigot and Sealing Washer (16062).
- (4) **Top Cover (16088) and Gear Assemblies**  
Remove Screws (54024/S/T), (54036/S/T), Seloc Washers (66101) from the front. Then Screws (54030/S/T) and Shakeproof Washer (66204). Carefully unscrew and remove (left-hand thread) Nylon Screw (64210), lift off Drive Dog (16061) and Drive Pinion (16930). Remove Split Pins (64902) and (64901) from Stub Shafts and take away Washers (66404) and Shims (66430). Lift off Penultimate Gear (7018), together with Vertical Drive Shaft Assembly (705). Remove Washers from under Penultimate Gear and Thrust Washer (66442) from Vertical Drive Shaft Assembly.
- (5) **Stop Quadrant Assembly (15026)**  
Procedure as A.700.
- (6) **Stop Pin Assembly (707)**  
Remove Grub Screw (64006/S/T) and withdraw Stop Pin Assembly from Pedestal (16105).
- (7) **Controller Assembly (16107)**  
Remove Cable Clamp from underneath Pedestal and withdraw Cable through Grommet (62308). Support the Controller (16107) by hand, remove the two Simmonds 2 BA Nylon Nuts (62908/0) and Fibre Washers (16220). It is essential that these Washers should be renewed on re-assembly. Withdraw Controller and remove Oil Seal (16089) and Clutch Spring (16079).
- (8) **Removing Body (16110) from Pedestal (16105)**  
It is only necessary to remove Hinge Pin (7630) to separate the Body from the Pedestal.  
NOTE: The Controller can be removed without dismantling the Top Cover by using Box Spanner (Tool No. KT10064).

## ADJUSTMENT OF MIXING IMPLEMENTS MODELS A.700 & A.700D



The correct adjustment for mixing implements is as follows .

- (a) **Whisk :** Should just clear the base of the Bowl.
  - (b) **Beater :** Should clear 3/32" off the base of the Bowl.
  - (c) **Dough Hook :** Should clear 1/8" off the base of the Bowl.
- Tilt the Body open and with the appropriate mixing implement in position hold the Planet Hub firmly, and loosen the locking nut two or three turns.
- Turn the mixing implement in a clockwise direction to raise, and in an anti-clockwise direction to lower. When adjusted correctly, tighten the Locking Nut, using Beater Adjustment Jig T.50. (See Illustration.)

## RENEWAL OF PARTS MODELS A.700 & A.700D

- (1) **Gears**  
Remove Planet Hub, Spigot, Top Cover and required Gear. If a Gear Tooth has stripped and metallic parts are found in the Grease, thoroughly clean Body, Top Cover and Gears and renew Grease.
- (2) **Grease**  
When grease requires renewing, thoroughly clean the Gears and their Housing, using a solvent. Refill the Gear Housing with 15 ozs. of specified Grease (16 ozs. for Model A.700D).
- (3) **Driving Pinion**  
Remove Spigot, Drive Pin and Driving Pinion. On renewal, ensure that there is a small amount of back lash between the Pinion and the Intermediate Gear Assembly. Should adjustment be necessary, slacken the Motor Mounting Bolts, and move the Pinion either into or out of mesh. Retighten Bolts.

## (4) Stop Quadrant

If the Stop Pin does not freely engage in the lower Quadrant Hole, it may be necessary to ease the hole with a round file. *This operation must be carried out with extreme care, and only performed when absolutely necessary.* Excessive enlargement will result in undue play between the Body and Pedestal.

## (5) Bowl Seat Springs

Check the tension by fitting a Mixing Bowl and Bowl Seat Plate. To reduce excess tension, apply a *slight* pressure to the Springs with the fingers.

## (6) Pedestal

A distorted Pedestal causing the Mixing Bowl to foul the Body, or the Beater to foul the base of the Mixing Bowl, when adjusted to its highest point, should be renewed. The Serial Number Plate must be transferred to the replacement casting.

**NOTE :** If the Beater fouls on the *side* of the Mixing Bowl, misalignment is usually due to transit damage or mishandling. If so, the Pedestal can be straightened by carefully pulling it into position, ensuring that the hinge is not strained during this operation.

## (7) Body and Top Cover Bearings

Correct positioning of new bearings and Stub Shafts require special press fixtures. It is therefore recommended that whenever fault occurs, the Body or Top Cover Assemblies should be exchanged.

## RE-ASSEMBLY MODEL A.700

- (1) Assemble Pedestal to Body with Hinge Pin (on very old machines when replacing the Pedestal a new Stop Pin should be fitted as the diameter of the Stop Pin Nose has been increased).
- (2) Insert Stop Pin Assembly into Pedestal and lock in position with Screw (64006/S/T).

**NOTE :** When renewing the above on old machines, fit the early type of Stop Pin Assembly and appropriate Quadrant.

## (3) Controller Assembly (703)

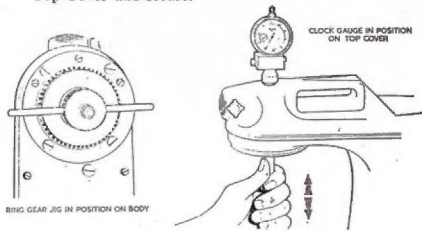
Fit NEW Oil Seal Washers, first 65607 then 65904 in recess in top of Body Casting. Correct position of Motor Shaft may be secured by using Alignment Jig KT9113 placed over the Gear Stub Shafts after inserting Controller. Secure with Motor Fixing Bolts and Washers. Secure Cable beneath Pedestal with Cable Clamp (16129).

- (4) **Stop Quadrant Assembly (1.26)**  
Reit Stop Quadrant and secure with Screws (64114/S/W).
- (5) **Top Cover and Gear Assemblies**

Fit Thrust Washer (66442) to Vertical Drive Shaft and Washer (66404) to Penultimate Gear Stub Shaft, then assemble in position. Fit Washer (66404) to Intermediate Gear Stub Shaft, position and check for correct gear and tooth engagement, using extra shims if necessary. Fit Washers (66430) and Split Pins to the Gear Stub Shafts. Fit Clutch Spring, Thrust Collar, Thrust Washer and Driving Pinion, ensuring that the inner end of the Spring locates into the recess of the Body.

Assemble Output Gear Shaft to Top Cover. Temporarily fit Top Cover to Body with Screws. Check there is end float on the Vertical Drive Shaft, between .010" and .015" measured with Clock Gauge T.49 fitted in the Juice Extractor Outlet. Should adjustment be necessary, raise or lower the Adjusting Bush (15060), using Tools T.51 and T.60. Locknuts (15061) secure Bush in position.

After setting end float, remove Top Cover and pack Gear Train with 15 ozs. of the specified grease. Place Jointing Ring (7865) round top of Body Casting, replace Top Cover and secure.



#### (6) **Ring Gear (7010)**

This must be concentric to the Vertical Drive Shaft and can only be determined by using Centralising Jig T.10. Half fill the teeth of the Ring Gear with a good quality cup grease. Place Shims over and insert Drive Pin into the Vertical Drive Shaft. The Planet Hub is then positioned with the Drive Pin engaging in the recess provided and secured with the Planet Nut.

**NOTE:** A further check should then be made to ensure that the end float limits are within .002"-.007". Adjustment being made by shimming between the Planet Hub and the Adjustable Bush.

#### (7) **Spigot at Base Plate**

Before finally tightening the Spigot Securing Screws, check that the Spigot bore is concentric to the Driving Pinion, using Beaker Spigot Centralising Jig T.70.

### **RE-ASSEMBLY MODEL A.700D**

- (1) **Assemble Pedestal to Body with Hinge Pin.**
- (2) **Insert Stop Pin Assembly into Pedestal and lock with Grub Screw (64006/S/T).**
- (3) **Controller Assembly (16107)**  
Tilt Body backwards and thread Cable through Grommet in Pedestal. Place Clutch Spring (16079) on Motor Shaft and replace Oil Seal (16089). Ensure that the Upper Bearing and the Lower Sealing Faces are flat and free from Rubber Flash. The entire Seal must be clean and free from all dirt.  
Insert Controller in Body, ensuring Seal is in position. Fit new Fibre Washers (16220) and replace Nuts (62908/0) and Washers.  
Correct position of the Motor Shaft is obtained by use of the Alignment Jig KT9113 placed over the Gear Stub Shafts.
- (4) **Replace Quadrant Assembly (15026)** and secure with Screws (64114/S/W). Adjust Internal length of Cable with the head of the machine raised and secure with Cable Clamp (16129) to Pedestal. Check Cable Clip (17095) for clearance with Pedestal.
- (5) **Top Cover and Gear Assembly**  
Fit Thrust Washer (66442) to Vertical Drive Shaft and Washer (66404) to Penultimate Gear Stub Shaft, then assemble in position. Fit Washer (66404) to Intermediate Gear Stub Shaft, position and check for correct gear and Tooth engagement. Fit Washers (66430) and Split Pins to Gear Stub Shafts.  
Assemble Drive Pinion (16060) to Motor Shaft. Fit Drive Dog (16061) and Nylon Screw (64210). Assemble Output Gear Shaft to Top Cover. Temporarily fit Top Cover to Body with Screws and check there is end float on the Vertical Drive Shaft, between .010" and .015", measured with Clock Gauge T.49.  
Should adjustment be necessary, raise or lower the screwed adjusting Bush within the Body Casting, using Tools T.51 and T.60. Locknuts (15061) secure Bush in position.  
After end float has been set, remove Top Cover and pack Gear Train with 16 ozs. of specified Grease. Place Jointing Ring (7865) round the top of Body Casting, replace Top Cover and secure.
- (6) **Ring Gear (7010)**  
Procedure as A.700.



**(7) Spigot (16055)**

Place Rubber Sealing Washer (16062) and Spigot (16055) in position, insert three Fibre Washers (65808) and Screws (52010/S/T). Before securing, check that the Spigot is concentric to the Drive Pinion, using Centralising Jig T.106.

**NOTE :** It is most important to tighten the three Fixing Screws evenly.

**NOTE : Drive Pinion Assembly (16930)**

Damage to the above may be due to the *air hole* in the Motor End Frame being blocked by moulding flash, causing pressure between the rubber seal and the end frame. This prevents the Drive Pinion from being fully declutched and causes excessive wear. Carefully check that the air-hole is free from such flash prior to fitting the motor or assembly concerned. When replacing Felt Washer (65709) it must be a tight fit on Pinion (16060)—Tool No. T.104 will assist in this operation.

**Nylon Drive Dog (16061) and Drive Pinion (16060)**

When complaints are received of failure of the Drive Dog, the following action should be taken :—

- (1) Ascertain that the user is allowing the motor to come to rest before removing the Liquidiser or similar attachment.
- (2) Check that the height of the Drive Dog above the Spigot is within our drawing tolerances, viz.: 0.843 Go and 0.783 Go, the Gauge forming an additional Service Tool (T.109).
- (3) If trouble still persists, check return Spring for sluggish action. This may be caused by Drive End Frame Air Hole being blocked.
- (4) When fitting new Drive Dogs, give preference to those made from "Natural" Nylon (this has a transparent look similar to the Goblet Coupling) as the strength of this material is greater.

**THE CONTROLLER  
GENERAL CONSTRUCTION  
MODELS A.700 & A.700D**

This consists of a Controller Yoke coupled to a Governor Spring attached to the Fan Assembly. The Yoke being free to move on the end of the Armature Shaft. A single pole leaf spring Switch (the Contact Bar) is mounted on a plastic block, and pivoted to one side of the Controller Housing. The switch blade is fitted with an insulating strip on which a ball on the revolving governor spring bears when the motor is running.

A Control Knob is fitted, showing specific motor speeds as quoted in recipes. When this Knob is moved from its 'off' position, the main switch is closed and power connected to the Motor through the closed Contact Bar.

When sufficient speed is attained, the governor weights flying outwards cause the ball to press against the switch blade, thus opening the contacts, also bringing into circuit a resistance causing a reduction in speed.

When the thrust of the governor yoke against the switch blade decreases, the contacts close, thus short-circuiting the Resistor and again applying full power to the motor.

The governor contacts are therefore continually opening and closing and the motor maintains any given speed. The speed is varied by movement of the contact bar Assembly (via the Control Knob) in relation to the Governor Assembly.

This regulator thus gives full voltage at all motor speeds and therefore a maximum of power with an infinitely variable control throughout the range.

**Controller Assembly**

To withdraw the above from the hinged end of the Body, remove the following :

**Model A.700**

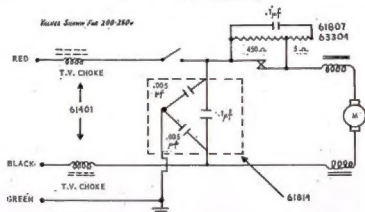
Stop Quadrant (15026)  
Cable Clamp (16129)  
Spigot (7020) and Base Plate (7430)  
Grub Screw (64017) and Drive Pin (7847)  
Drive Pinion (731) and Clutch Spring (15020)  
Motor Mounting Bolts (52428/S/T)

**Model A.700D**

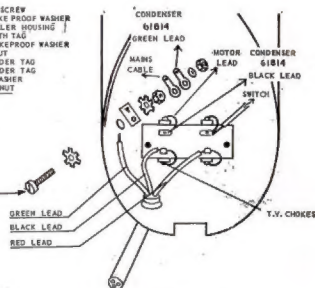
Stop Quadrant (15026)  
Cable Clamp (16129)  
Spigot (16055)  
Nylon Screw (64210)  
Drive Dog (16061) and Drive Pinion (16391)  
Simmonds 2 BA Nyloc Nuts (62908/0)



## LIST OF SPARE PARTS

*YOUNG SUMMIT FOR 200-250.*

54112/5/T SCREW  
60205 SHAKE PROOF WASHER  
CONTROLLER HOUSING  
05314 EARTH TAG  
60205 SHAKEPROOF WASHER  
07706 NUT  
05304 SOLDER TAG  
65304 SOLDER TAG  
00206 WASHER  
07306 NUT



EARTHING ARRANGEMENT A.700

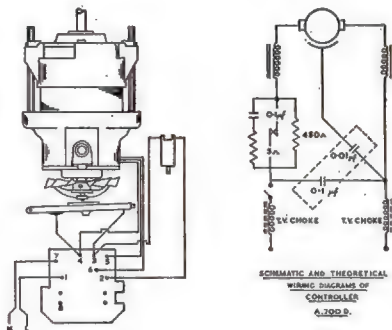


Part No.  
16316

Part No.	No. Off	Description	
16316	1	Motor 200-250V	
	or	16317 (150-175V)	
	or	16318 (120-140V)	
	or	16319 (100-120V)	
16397	1	Component Panel Assembly Consisting of:	
16072	1	Component Panel	
16100	1	Resistor and Condenser Brkt.	
65310 (was 16359)	4	Solder Tag	
65811 (was 16360)	2	Solder Tag	
65312 (was 16361)	1	Solder Tag	
65313 (was 16362)	2	Terminal	
54012/S	2		
(was 1000/4/5)	2		
66310	2	Screw 4 BA Ch.	
		Hd. $\frac{1}{8}$ " lg. Steel	
		4 BA Clamping Washer	
66604 (was 1008/4)	2	Copper Washer	
61822	1	Capacitor .1 mfd.	
		$\pm 20\%$	
63302 (was 7818)	1	Resistor 5 ohms	
61401 (was 15655)	2	T.V. Chokes	
63305-A (was 16071)	1	Resistor 450 ohms	
		(200-250V)	
	or	63305-B 350 ohms	
		(150-175V)	
	or	63305-C 220 ohms	
		(120-140V)	
	or	63305-D 145 ohms	
		(100-120V)	
61824	1	Capacitor .1 mfd.	
		$\pm .01$ mfd.	
61201 (was 7851)	1	Twin P.V.C. Covrd.	
		Wire $9\frac{1}{2}$ " lg.	
61307 (was 17117)	1	Red Covered Wire	
		7" long	
66602 (was 16411)	1	22 S.W.G. Tinned	
		Copper Wire $7\frac{1}{2}$ " long	
64611 (was 16412)	1	Sleeving $5\frac{1}{4}$ " long	
66203 (was 7889)	2	4 BA External Shakeproof Washer	
17095	1	Cable Clip	
16035	1	Controller Housing Assembly	
16036	1	Controller Cover	
16037	1	Switch Cover	
16038	1	Knob	
16039	1	Knob Retainer	
16043	1	Cam	
16079	1	Clutch Spring	
16050	1	Screw Retainer	
16057	1	Striker	
65107 (was 16085)	1	Switch	
16098	1	Contact Bar Assembly Consisting of:	
		Contact	
16044	1	Terminal Strip	
16045	2	Heat Radiating Disc	
16047	1	Leaf Spring	

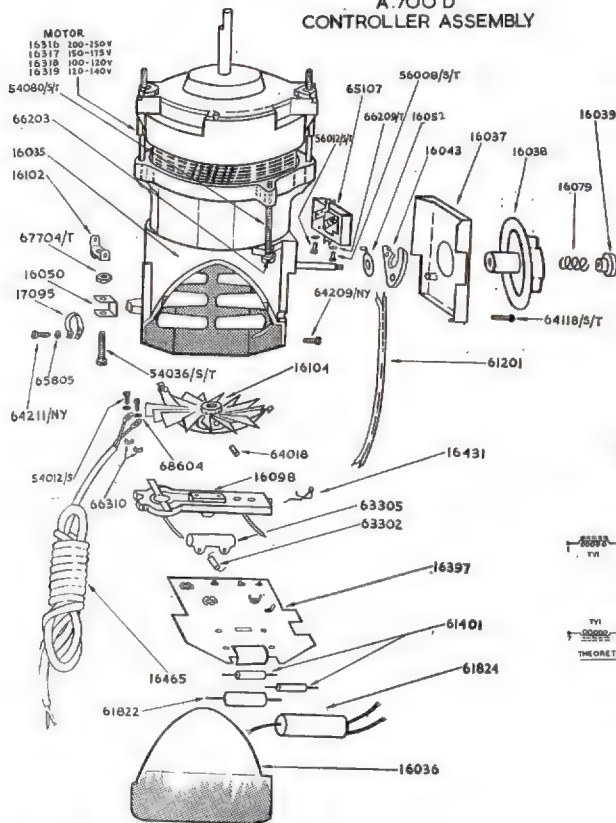
<i>Part. No.</i>	<i>No. Off</i>	<i>Description</i>
7936	1	Contact
7601	1	Pressure Pad
16040	1	Contact Bar
63405 (was 16092)	2	Rivet
63406 (was 16093)	2	Rivet
63407 (was 16094)	2	Rivet
16102	1	Hinge Assembly
16104	1	Spring and Fan Assembly
64118/S/T		
(was 16301)	1	Screw Phillips No. 6 $\frac{1}{8}$ " long.
66209/T (was 16303)	1	6 BA Internal Shakerproof Washer
64209/N/Y (was 16335)	1	Screw 4 BA x $\frac{1}{8}$ " Ch. Hd. Nylon
64211/N/Y (was 16337)	1	Screw 4 BA x $\frac{1}{8}$ " Ch. Hd. Nylon
16465	1	Cable Assembly
61216	A/R	Cable (25yds/5amp)
16431	1	Fraction Spring
65805 (was 7935)	1	Fibre Washer
54036/S/T		
(was 1000/4/17)	1	Screw 4 BA x $\frac{1}{4}$ " Ch. Hd.
54080/S/T		
(was 1000/4/25)	2	Screw 4 BA x $\frac{1}{4}$ " Ch. Hd.
56008/S/T		
(was 1000/6/3)	1	Screw 6 BA x $\frac{1}{8}$ " Ch. Hd.
56012/S/T		
(was 1000/6/5)	1	Screw 6 BA x $\frac{1}{8}$ " Ch. Hd.
67704/T (was 1006/4)	1	Half Nut 4 BA
67404/T (was 1005/4)	1	Full Nut 4 BA
64018	2	Fan Grub Screw

**NOTE:** When ordering spares, please quote Part Numbers together with Descriptions as listed.

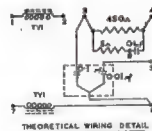




# A.700 D CONTROLLER ASSEMBLY

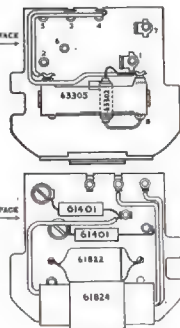


COMPONENT PANEL A.700 D.  
ASSEMBLY DETAILS



UPPER FACE

LOWER FACE



## DISMANTLING AND REPAIR OF PARTS FOR CONTROLLER MODEL A.700D

- (1) Having removed the Controller Assembly (16107) from the Body of the machine, remove Controller Cover (16036) by carefully extracting Nylon Screws (64209/NY and 64211/NY). Remove Cable Clip (17095), Washer (65805) and Mains Lead (16465), slide out Component Panel Assembly (16397) and unsolder leads.
- (2) **Removing Knob (16038) and Switch (65107)**  
Remove the Knob Retainer (16039), using Special Tool Part No. 16493. Withdraw Spring (16079) and Knob (16038). Remove Switch Cover (16037) and Screw (64118/S/T). Remove Cam (16043) and Striker (16057). The Switch can then be removed by extracting Screws (56008/S/T), (56012/S/T) and Washers (66209/T).
- (3) **Contact Bar (16098)**  
Remove Friction Spring (16431) from Contact Bar. Unscrew Adjusting Screw (64036/S/T) from hinged end, leaving it in Screw Retainer (16050). Remove Hinge Assembly (16102). Withdraw Contact Bar by sliding to free the hinged end.
- (4) **Removing Controller Housing Assembly (16035)**  
Unscrew and remove Screws (54080/S/T) and withdraw Housing.
- (5) **Fan and Spring Assembly (16104)**  
Loosen Grub Screw (64018).  
If replacements are to be made, check the concentricity of the Pin to the Fan Hub Bore, using Special Gauge T.103.

## ASSEMBLING CONTROLLER PROCEDURE MODEL A.700D

- (1) Apply antiscuffing Paste (16392) to Controller Spring Spindle. Assemble Fan (16104) to Motor Spindle, using Spacing Gauge Tool, No. T.107 to ensure correct position, and lock with Grub Screw (64018).
- (2) **Replace Controller Housing Assembly (16035)**, ensuring all Motor leads are taken through slot provided. Locate Controller Housing, using the tongue to trap leads. Secure with Holding Screws (54080/S/T).
- (3) **Replacing Contact Bar (16098)**. With Pressure Pad (7601) uppermost, enter free end through aperture, enter hinged end. Replace Hinge Assembly (16102). Replace Adjustment Screw. Fit Friction Spring to free end with two legs away from the Controller Knob Spindle.
- (4) **Replacing Switch (65102)**. Solder Twin P.V.C. Lead to terminals on Switch. Assemble Switch to Housing, using Screws (56008/S/T and 56012/S/T) and Lock Washers (66209/T).
- (5) **Assembling Knob (16038) and Cam (16043), etc.**  
Place Striker (16057) over Switch Spindle with tongue downwards engaging in Switch toggle. Assemble Cam (16043) with short spigot engaging in the hole in Striker and the hole over the Contact Bar Spigot. Take the Motor and Switch Leads through the D-shaped hole adjacent to Contact Bar. Replace Switch Cover (16037) and secure with Screw (64118/S/T). Assemble Knob (16038), engaging the hole with long spigot of Cam (16043). Replace Spring (16079) and Lock with Knob Retainer (16039). (Using Tool No. 16493.)
- (6) **Replacing Component Panel Assembly (16397)**. Care must be taken to ensure the leads are taken through the slot provided in the Board. Locate Board in slots in Controller Housing. Replace Mains Lead (16372) with Black Lead to front Terminal and Red Lead to rear terminal. Make sure Contact Bar LEADS ARE CLEAR OF RESISTOR. Fit Cable Clip (17095) and carefully secure with Nylon Screw.  
The Motor should then be tested and set to 3,500/4,000 r.p.m.

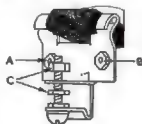
## ADJUSTMENT OF SPEED MODEL A.706

### Adjustment for Minimum Speed

This is a final adjustment only, for preliminary setting instructions see Renewal of Controller Parts.

With the Control Knob set at minimum speed, count the Planet Hub revolutions against a watch. The speed should be within the limits 57.4 to 65.6 r.p.m.

To adjust the speed, tilt open the Body from the Pedestal, and lock in position. Remove the Bowl and Beating Implement. With the Planet Hub facing the operator, the left-hand side of the control unit will reveal a small Hinge, with an adjusting Nut and set Screw with Lock Nuts.



Loosen the hinge holding Nuts A and B and with a 4 BA Spanner adjust Nut C up or down according to the required speed (up to decrease and down to increase). The Control Knob should be at its lowest speed during this adjustment. When satisfactory, lock up Nuts A, B and C

### Minimum Speed in r.p.m. at various attachment outlets

Liquidiser	Juice Extractor	Mincer	Planet Hub	Beater Shaft
3,500	57.4	43.0	57.4	192
Tested at 240v. No load.				

### Average Maximum Speed in r.p.m. at various attachment outlets, etc.

The actual speed will vary according to local voltage variations.

Liquidiser	Juice Extractor	Mincer	Planet Hub	Beater Shaft
14,500	197	148	197	655

## ADJUSTMENT OF SPEED MODEL A.700D

### Adjustment for minimum speed

To make the final adjustment for minimum speed, with controller re-assembled in Body, tilt open the Body from Pedestal and lock in position, with the Planet Hub facing the operator. Remove Bowl and Beaters. The adjusting screw will be seen on the left-hand side of the Control Unit. This screw holds the hinge in position and is secured by means of a locking nut. Release the lock nut by about one turn, hold the nut with a spanner and adjust the screw with a screwdriver. To increase the speed turn screw clockwise. To decrease turn anti-clockwise and lock in position by means of the lock nut. Switch on control, then turn in anti-clockwise direction in order to take up any back lash and to ensure that the control is in its lowest possible setting. The motor speed should then be set between 3,500 and 4,000 r.p.m. (maximum) at this setting.

With the Control Knob set to minimum speed, count the Planet Hub revolutions against a watch. The speed should be within the limits of 57.4 to 65.6.

### Minimum Speed Tol. in r.p.m. at various attachment outlets.

Liquidiser	Juice Extractor	Mincer	Planet Hub	Beater Shaft
3,500	57.4	43.0	57.4	192

Tested under minimum governing conditions.

### Average Maximum Speed in r.p.m. at various attachment outlets, etc.

The actual speed will vary according to local voltage variations.

Liquidiser	Juice Extractor	Mincer	Planet Hub	Beater Shaft
14,500	197	148	197	655



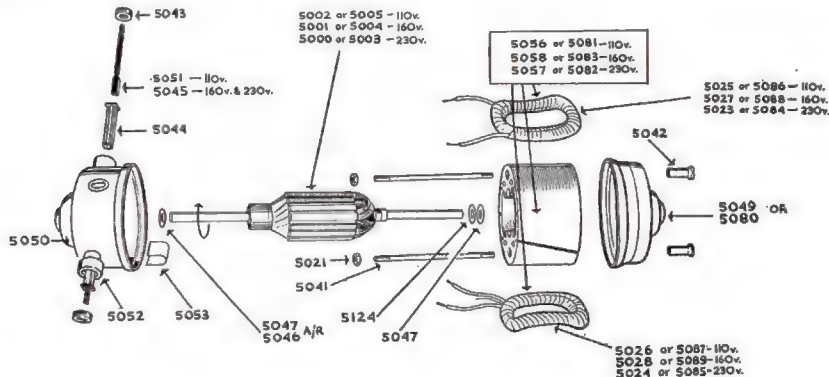
**THE MOUL  
LIST OF SPARE PARTS  
MODEL A.700**

Description	Stack	110V	160V	230V
Motor	1½	5102	5011	5010
		(was 7224182)	(was 7224181)	(was 7224180)
Motor	1½	5016	5015	5014
		(was 7224189)	(was 7224188)	(was 7224187)
Armature	1½	5002	5001	5000
		(was 7224123)	(was 7224122)	(was 7224121)
Armature	1½	5005	5004	5003
		(was 7224127)	(was 7224126)	(was 7224125)
Field Assembly	1½	5056	5058	5057
		(was 7224774)	(was 7224776)	(was 7224775)
Field Assembly	1½	5081	5083	5082
		(was 7225200)	(was 7225202)	(was 7225201)
Field Coil Left Hand	1½	5025	5027	5023
		(was 7224462)	(was 7214464)	(was 7224460)
Field Coil Left Hand	1½	5086	5088	5084
		(was 7225205)	(was 7225207)	(was 7225203)
Field Coil Right Hand	1½	5087	5089	5085
		(was 7224463)	(was 7224465)	(was 7224461)
Field Coil Right Hand	1½	5026	5028	5024
		(was 7225206)	(was 7225208)	(was 7225204)
Brush Assembly	1½	5051	5045	5045
		(was 7224751)	(was 7224704)	(was 7224704)
Brush Assembly	1½	5051	5045	5045
		(was 7224751)	(was 7224704)	(was 7224704)

Description	Part No.
Drive End Frame Assy. 1½	5049 (was 7224742)
Drive End Frame Assy. 1½	5080 (was 7225186)
Commutator End Frame Assy.	5050 (was 7224744)
Brush Guide (Inner)	5044 (was 7224697)
Brush Guide (Outer)	5052 (was 7224754)
Brush Cap	5043 (was 7224694)
Locknut	5021 (was 7224250)
Shim .020	5047 (was 7224720)
Shim .010	5046 (was 7224719)
Bracket	5053 (was 7224755)
Through Bolt Nut (Special)	5042 (was 7224692)
Through Bolt	5041 (was 7224690)
Nylon Washer	5124 (was 7225638)

Common to all  
1½ & 1 motor  
assemblies

NOTE: When ordering spares, please quote Part Number together with Description as listed.



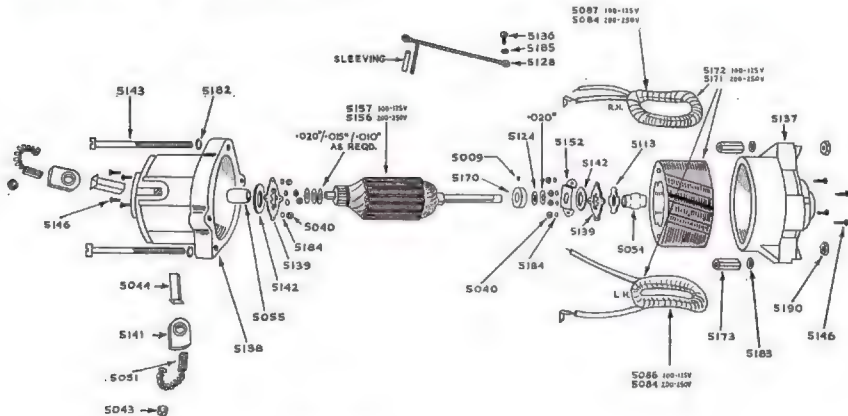
A.700. MOTOR

**MODEL A-700C**

Common  
to all  
voltages

Common  
to all  
voltages

NOTE: When ordering spares, please quote Part Numbers together with Description as listed.



A.700D. MOTOR.

## SERVICING THE MOTOR MODELS A.700 & A.700D

### Construction of Motors

The various Motors can be identified by the colour of their leads and the voltages are stamped on the end frames. The A.700 end frames are metal whilst those of the A.700D are plastic.

A.700	A.700D
100/130v.—Black	100/125v.—Black/Yellow
160/170v.—Blue	200/250v.—Red/Yellow
200/250v.—Red	

### Checking the Motor Prior to Dismantling

Before dismantling, give visual check for loose or broken brush holders, damaged wires, etc., and check for play in bearings.

**End Play.**—Factory limit for end play is minimum .005", maximum .010". Less than this figure can give binding when the motor is hot and more will tend to affect the action of the speed regulator.

**Side Play.**—Factory limit for maximum side play is .001". The Motor will function satisfactorily with appreciably more side play than this, but when overhauling Motor, it is advisable to change the bearings if play exceeds .0016".

**Running Test.**—Couple motor to supply, when the following results should be obtained. Any wide divergence from these figures indicates a faulty motor.

#### MODEL A.700 ONLY:

Motor	Test			Max.	Stack	Lead
Pr. No.	Volts	Volts	R.P.M.	Watts	Size	Colour
5010	230	150	12,000/14,000	55	1½	Red
5011	160	95	" "	55	1½	Blue
5012	110	75	" "	62	1½	Black
5014	230	150	" "	55	1½	Red
5015	160	95	" "	55	1½	Blue
5016	110	95	" "	70	1½	Black

#### MODEL A.700D ONLY:

Motor	Test			Max.	Stack	Lead
Pr. No.	Volts	Volts	R.P.M.	Watts	Size	Colour
16319	110	95	12,000/14,000	70	1½	Black
16316	230	180	" "	55	1½	Red

### Dismantling the Motor

Remove the brushes by unscrewing caps. Examine for undue wear. Minimum overall length should be ½". Examine springs for overheating or distortion.

Scribe a line across the field stack and end frames to ensure correct alignment when re-assembling. The armature shaft may be possibly buried by fan grub screw. Carefully remove any burrs to avoid damage to bearings when removing shaft. Remove locknuts and through bolts. The drive end frame and armature can now be removed. Note number and position of shims at both ends of the armature. Draw off commutator end frame and disconnect field leads at brush holder. Connection is made by means of spring brush tags inserted between the brush guide and plastic moulding.

### Testing Components

Remove all carbon dust from components and wash in white spirit, petrol or carbon tetrachloride and dry before testing.

### Armature Check

Give visual check for:—

- Burnt or badly worn commutator
- Loose or damaged windings
- Thrown solder
- Damaged shaft or worn bearing journals
- Overheated windings

Overheated windings will be apparent from discoloration or charring, a shortened coil by discoloration. No attempt should be made to repair faulty armatures, the replacement component should be fitted.

Re-skim worn commutators, minimum size .950", using a sharp-pointed tungsten carbide tipped tool for best results. Micas should be left flush. Maximum eccentricity with shaft .0015".

### Shaft Bearing Journals

Minimum size for shaft journals is .3114". Those more than a few tenths of a thou' below this should be discarded.

### Electrical Test of Armatures

After passing visual and mechanical checks, apply 1000v., 50 cycles across the commutator and the shaft for one minute. If high voltage test gear is not available, a 500v. D.C. megger can be used and reading obtained should not be lower than 5 megohms. If neither is available, a rough check can be given by using a series test lamp at normal mains voltage.

### Field Assembly Test

Overheating or burning field coils should be replaced. First check the insulation resistance to core, using whatever equipment was used for a similar test on the armature and scrapping any with faulty insulation.

Next test for continuity and resistance.



**A.700 ONLY:**

Test Specifications for Armature and Field			Nominal Resistance			
Model No.	Voltage	Stack Size	Part No. Armature	Field	Resistance Armature	Field
5010	230	1½	5000	5057	19.0	17.5
5011	160	1½	5001	5058	7.5	8.5
5012	110	1½	5002	5056	3.0	3.6
5014	240	1½	5003	5082	18.0	15.5
5015	160	1½	5004	5083	7.2	7.2
5016	110	1½	5005	5081	5.3	5.0

**A.700D ONLY:**

Test Specifications for Armature and Field				Nominal Resistance	
Model No.	Voltage	Stack Size	Part No.	Resistance	
No.			Armature	Armature	Field
16319	100/125	1½	5157	5172	5.3 5.0
16316	200/250	1½	5156	5171	18.0 15.5

- NOTE: (a) Armature resistance taken across brushes.  
(b) Field resistance, both coils in series.

**Fitting New Field Coils**

Replacement coils should be fitted in the same position as the old ones, as they are right-hand and left-hand. They are supplied unvarnished and when fitted over the pole pieces, need to be carefully formed to position, ensuring that they will not be fouled by the armature or end frames. After fitting, the assembly should be pre-heated to drive out moisture and dipped or brushed with good quality stoving insulating varnish and baked until hard. When cold, tests should be applied as above for earthing. If varnishing and baking facilities are not available, fit a new field assembly. This will necessitate adjustment of end float by means of the adjustable Bush.

NOTE: On some early models of the A.700D and on all models of the A.700, before the introduction of the adjustable Bush, this will possibly necessitate re-shimming of the armature in order to maintain the specified limits of end float. It is important that the cross pin hole on A.700 motors and the projected length of shaft on A.700D motors is not altered from its original relative dimension from the motor end frame. This may seriously affect gear alignment and the use of Liquidiser or other attachments.

**A.700** Centre line of Drive Pin Hole to end frame 2A" (Maximum error  $\pm .005"$ ).

**A.700D** End face of shaft to motor end frame 2" ( $\pm .010"$ ).

If field coil tests are satisfactory, but leads are perished, they may be sleeved with systoflex. Check the tag at the end of brush leads for a good soldered joint.

**End Frame Assemblies**

These are fitted with sintered bronze, self-aligning bearings soaked in oil and lubricated from felt washers. The bearings are held in position by a removable Spring Steel Retainer Plate, with sufficient tension to allow for alignment and yet prevent any possibility of skidding. Should A.700 bearings be badly worn, fit a new end frame, as on this model the retainer is staked in position and difficult to replace. If bearings are in good condition, felt pads should be loaded with any good quality lubricating oil, with viscosity equivalent to S.A.E. 30.

**Commutator End Frames**

Check the commutator end frame bearing as above and also the brush holders. Check brushes slide freely in the inner brush guide. Examine the brush holder for damage and ensure it is firmly clamped by the metal strap in the plastic moulding and check for insulations from brass holder to the metal strap, using the same equipment as used for checking the armature and the field insulation to earth. In the event of brush holders proving defective, a new commutator end frame assembly can be fitted.

**Re-Assembly of Motor**

Commence by inserting the field lead tags between the moulding and the brass brush holder; setting the tag is necessary to obtain a firm contact. It is important that the leads are connected to the appropriate brush holder. reversal will reverse rotation of the motor. Thread supply leads through the hole in the side of the end frame. Place field assembly in the end frame, aligning scribe mark (should end frame have been changed, a line should be scribed on new frame in exactly the same position as on the old). Check that the field leads cannot foul the armature.

Ensure that the Nylon Thrust Washer is against the commutator and fit the original shims, adding an extra shim if it is found necessary. Lightly oil the shaft and insert commutator end bearing. Fit correct shims to the drive end shaft and fit the frame, again lining up to the scribe mark. While the motor is running, tap the shaft lightly with the handle of a screwdriver or similar object in order to align the bearings. Check for end play, adjusting to not less than .005" and not more than .010".

NOTE: In the case of A.700 motors, should a new armature have been fitted, it will be necessary to use Service Drill Jig No. T.16, to ensure accurate positioning of the Drive Pin Hole. (Maximum permissible length of shaft from Drive End Frame 2½").

The height of the motor shaft should conform with the height Gauge T.100 in order to give correct positioning when the Liquidiser or Adapter is fitted to the machine.

## INDEX TO CHANGES IN DESIGN MODEL A700

### Vertical Drive Shaft Assembly

The difference between the various gear assemblies is as follows:—

- (a) **Vertical Drive Shaft Assembly 17476 (was 705 MK1)**  
The distance from the centre line of the drive pin hole, to the **Mazak Final Drive Spur Gear** is .846".
- (b) **Vertical Drive Shaft Assembly 17477 (was 705 MK2)**  
The distance from the centre line of the drive pin hole to the **Steel Final Drive Helical Gear** is .846".
- (c) **Vertical Drive Shaft Assembly 16016 (was 16016 MK3)**  
The distance from the centre line of the drive pin hole to the **Steel Final Drive Helical Gear** is 1.158".
- (d) **Vertical Drive Shaft Assembly 705 (was 705 MK4)**  
The distance from the centre line of the drive pin hole to the **Mazak Final Drive Spur Gear** is 1.158".

When ordering spares, always quote the Title and Part Number of the gear required.

### Penultimate Gear Assembly

- (a) One-piece Mazak Gear and Pinion MK I 7018.
- (b) Composite Mazak Gear and Steel Pinion MK II 767.

NOTE : Mazak Gears will not run in mesh with Steel Gears.

### Oil Seal Washer

To improve the oil seal between the Motor End Frame and Body Casting, two Oil Seal Washers—

65607 (Hard)  $1\frac{1}{2}$  O/D  $\times \frac{1}{8}$ " I/D  $\times 1/32$ "

65904 (Soft)  $1\frac{1}{2}$  O/D  $\times \frac{7}{8}$ " I/D  $\times \frac{1}{8}$ "

—have replaced Oil Seal Washer 7527.

First introduced on Chef A.700, Serial No. 255615.

### Locknut 17579 (Mixing Attachments)

To improve locking of the implement shaft, the depth of the counter bore in the shaft end of the Mixing Implements has been increased to  $3/32$ " to accept a  $\frac{3}{8}$ " I/D Washer 66427, and the shoulder on the Locknut has been removed.

First introduced on the following machines :

Dough Hook and "K" Beater Serial No. 176807

Whisk Serial No. 177307

### Resistor Shield 15987

In order to provide more protection and coverage to the Resistor 63304, a Leatheroid Resistor Shield 15987 has been introduced, which is shaped to cover the lowest part of the Resistor completely.

First introduced on Chef A.700 Serial No. 169360.

### Motor End Ag Bolts 52428/S/T

To give greater length of engagement the Motor Fixing Bolts 2 BA  $\times \frac{3}{8}$ " 1004/2/3S were increased to 2 BA  $\times \frac{7}{8}$ " long 52428/S/T.

First introduced on Chef A.700 Serial Number 188233.

### Contact Bar and Condenser Assembly

To promote smoother running on D.C. machines, provision has been made to introduce a Contact Limiting Screw 56016 on the standard Contact Bar to restrict the opening of the contacts.

NOTE : The Contact Limiting Screw is fitted to D.C. Machines only.

First introduced on Chef A.700 Serial Number 203340.

### Condenser Part No. 61814

Metal Canister type of Condenser with 3 leads.

### Condenser 61807 Type 4700B

Replaced by 'Plesseal' .1 mfd  $\pm 20\%$  Condenser Part No. 61807.

When the 'Plesseal' Condenser is fitted the Insulating Washers (66006) are no longer necessary.

### Earthing Arrangements

The earthing position on the Controller Assembly has been moved from the terminal panel to the Controller Guard. This has meant the deletion of the 4 BA Single Solder Tag 7844 on the terminal panel and the addition of the following parts :—

6 BA  $\times \frac{3}{8}$ " Round Head Screw 56112/S/T 1 off

6 BA Washer 68206 1 off

6 BA Locknut 67706 3 off

6 BA Single Solder Tag 65304 2 off

6 BA External Shakeproof Washer 66205 2 off

First introduced on Chef A.700 Serial Number 210,019.

## Motor Drive Pinions

### (A) Motor Drive Pinion 731 MK I

The Drive Pinion with short counter bore 7/64" and short Clutch Spring 7803 for use with 1 1/4" Stack Motors only.

### (B) Motor Drive Pinion 731 MK II

The Drive Pinion with a 1/8" counter bore and redesigned Clutch Spring 15020 for use with either 1 1/4" or 1 3/8" Stack Motor.

### Planet Hub

With the introduction of the Adjustable Bush it was necessary to lower the Drive Pin on the Vertical Drive Shaft, the mating portion in the Planet Hub being lowered correspondingly. This modified Planet Hub was referred to as Part No. 720 MK II. A Planet Hub 720 MK III has been introduced with a modification to accept a Distance Collar 15764 which has increased the clearance between the Planet Gear 7612 and the Planet Hub Bearing.

Planet Hub 720 MK I—Fixed mainshaft bearing (up to Serial No. 103569)

Planet Hub 720 MK II—Adjustable Bush.

First introduced on Chef A.700 Serial No. 103,570.

Planet Hub 720 MK III—Distance Collar

First introduced on Chef A.700 Serial No. 213,900.

NOTE: Planet Hub Assemblies before Serial No. 213,900 will not accommodate the Distance Collar 15764.

### Resistor Plate

To improve insulation by ensuring that the Resistor terminals are further insulated from the Body Casting, a new Resistor Plate 15986, 2 3/8" x 2 1/2", has replaced Resistor Plate 7484, 2 3/8" x 2". A new Resistor Shield (15987) also replaces Resistor Shield (15669).

First introduced on Chef A.700 Serial No. 255,183.

### Planet Nut 7656

To ensure a more positive locking of the Planet Hub Assembly the Domed Planet Nut and the Fibre Washer 65803 have been replaced by a "Simmonds" Nylon Cap Nut.

IMPORTANT: Do not fit Fibre Washer 65803 when Nylon Cap is used.

First introduced on Chef A.700 Serial No. 266,422.

### Ring Gear 7010

The flange thickness of the above gear has been increased from .100" to .151" and spares should now be ordered as follows:—

Part No. 7010/4 MK I, 100" for Machines prior to Serial No. 225,000)

Part No. 7010/8 MK II (.151" for Machines Serial No. 225,000 onwards).

### Castings

(a) **MK I Body Casting 723** has a plain oil-impregnated bush (60514) for mainshaft, no locating slot for the redesigned Clutch Spring 15020, and no provision for the Body Catch 15018 (Stop Quadrant 15026 MK III may be used on these castings, when fitted on a MK III Pedestal).

(b) **MK II Body Casting 723** has provision for the adjustable Bush Assembly for the mainshaft, a slot to accommodate the new Clutch Spring and a cast flat for mounting the Body Catch 15018. Stop Quadrant 15026 MK II is used with these castings. The MK II Body is unobtainable and it is recommended that a complete set of MK III Castings should be fitted if damage to the old Body is beyond repair.

(c) **MK III Body Casting 723** has provision for the adjustable Bush Assembly for the mainshaft, a locating slot to accommodate Clutch Spring 15020, and no provision for the Body Catch 15018. Stop Quadrant 15026 MK III is to be used on these Castings.

(d) **MK I Pedestal 7001**, old type Pedestal. Replacements of this part are no longer available and it is recommended that the MK III Pedestal be fitted.

(e) **MK II Pedestal 7001** has a cast recess to locate the tongue of the Body Catch 15018. It is recommended that a complete set of MK III Castings be fitted as supplies of these are no longer available.

(f) **MK III Pedestal 16105** has no cast recess to locate the tongue of the Body Catch 15018 and can be assembled to the MK I Body.

### Stop Pin Assembly 707

The nose of the Stop Pin has been enlarged and tapered in order to give more positive locking location in the Quadrant. These parts should now be ordered as follows:—

Stop Pin, Old Type	Part No. 707 MK I
New Type	Part No. 707 MK II

### Alternative to Motor, Part No. 5010

The above motor cannot always be supplied due to economic reasons, therefore a completely interchangeable motor of new design (Part No. 5059) has been introduced, identical to the 1 1/8" stack motor (5014) except the original drive end frame assembly with non-protruding bearings is fitted. Motor 5010 should still be requested but the new model may be supplied.



## INDEX TO CHANGES IN DESIGN MODEL A.700D

### Planet 'D' Gears (Part No. 7612)

To increase the strength of these Gears the material has been changed to "Carp" Brand, replacing the original "Vole". These are easily identified by a black spot on the face and were first introduced on the following Serial Numbers:—

110v. Machines	350544
Standard	370776
Canadian	286419
Norway	377104

### Bevel Gears (Part Nos. 7611, 7655, 15762 and 15763)

The above are now being marked by the suppliers thus: 'M' and 'D.G.' to enable matching of replacements where possible. This is of assistance towards quiet running and Engineers are therefore recommended to match gears wherever they can.

### Adjustable Bushes: (5170)

The above have been introduced on motors to control more closely the armature end float to within .005/.010"

### 1½" Stack Motors, 200/250v.

All motors with a date code later than J7 (i.e., September, 1957) have adjustable Bushes and were introduced during September on Chef Serial No. 370776.

NOTE: To date, no 110v. machines have been fitted with this Adjustable Bush, but it is anticipated that this procedure will follow.

### Cover Cap

An improved Cover Cap has been introduced having internal ribs added to the moulding which locate on the spigot in order to prevent the component becoming too easily detached from the machine. This was first introduced on Chef Serial No. 392750.

In addition, an alternative type of Spring Clip is available (Part No. 16960) for use with the earlier Cover Caps. This will effect considerable improvement in securing the Cover Cap in position on the Mixer.

It should be noted that the improved Spring Clip CANNOT be used on the Cover Cap incorporating the internal ribs.

### Control Knob

In order to overcome the objection to lack of 'line-up' on the control numbers, a new type of Knob with revised numbering and increased flange thickness has been introduced. This gives a more accurate indication of motor speed. First introduced on Chef Serial No. 394960.

### Mincer Clamp Screw

To obtain increased grip and to improve the appearance, the Mincer Clamp Screw (Part No. 2008) has been redesigned. This will in no way affect interchangeability.

### Motor and Co.oller

In order to reduce possible distortion of motor drive end frames, the flange thickness of Oil Seal (Part No. 16089) has been decreased from .156" to .105"/.125".

This does not affect interchangeability and was first introduced on Chef Serial No. 399730.

To improve the performance of the Controller, the .015" x 45° chamfer on the ball retainer has been deleted and a spherical radius added. This component is not supplied separately but comes complete with Spring and Fan Assembly (Part No. 16104).

The above change was first introduced on Chef Serial No. 411050.

### T.V. Chokes (Part No. 61401)

In future T.V. Chokes (61401) will be identified by their colour coding. This was first introduced on Chef Serial No. 404700.

Colour	Value
YELLOW	1 amp.
WHITE	2 amp.
BLACK	3 amp.

NOTE: Existing T.V. Chokes have blue sleeves with either 2 amp. or 3 amp. clearly indicated on them.

### Fibre Cable Clamp (Part No. 15500)

In order to accommodate all types of cable this has been replaced by the current type of Cable Clip (Part No. 17095). This in no way affects interchangeability.

### Red V.I.R. Cable (Part No. 15978)

This has been replaced by Part No. 61307 red P.V.C. Cable in order to standardise the insulation and comply with the requirements of tropical countries.

### Rear Top Cover Fixing Screws (54030/S/T) & Washers (66204)

In order to obviate any possibility of metal particles being allowed to fall into the Top Cover grease, due to the 'cutting' action of the internal teeth Shakeproof Washers (66204) on the rear Top Cover Screws (54030/S/T), these Washers have been replaced by EXTERNAL teeth Shakeproof Washers Part No. 66203.

First introduced on Chef Serial No. 427275.

### Drive Pinion (Part No. 16060)

In order to give an improved oil seal, the above has now been modified and has an oilite bearing with a slightly concave face. This does not affect interchangeability and was introduced on Serial No. 479342.

### Component Panel Assembly (Part No. 16397)

Mains terminals on the above assembly are now marked "red" for live and "black" for neutral. This commenced on Serial No. 536435.

**Spatula (Part No. 16996)**

A new "one-piece" moulded polythene Spatula has been introduced. This was first released with Chef Serial No. 456501.

**Cable Clip (Part No. 18143)**

The above cable clip has been introduced as being more suitable than the original type (Part No. 16129), which it now supersedes. This change commenced on Serial No. 538158.

**Ring Gear & Spigot Fixing Screws**

Shorter screws have been introduced on the ring gear and the spigot, necessitating the following changes:—

*Delete* 3 off Spigot fixing screw 2 BA  $\times \frac{3}{8}$ " Part No. 1000/2/3.

4 off Ring Gear fixing screws 4 BA  $\times \frac{7}{16}$ " Part No. 54014/S/T.

*Add* 3 off Spigot fixing screws 2 BA  $\times \frac{7}{16}$ " Ch. Hd. Part No. 52010/S/W.

4 off Ring Gear fixing screws 4 BA  $\times \frac{3}{8}$ " Ch. Hd. Part No. 54012/S/T.

The above change commenced with Serial No. 515181 (on Ring Gear), Serial No. 536215 (on Spigot).

**Grease (Mobile No. 610)**

A new type grease has been introduced for use in Chef gear-boxes, and was first used on Serial No. 506304.

**Grease (Shell L.G.P. No. 1)**

The grease has been changed from Mobile No. 610 to Shell L.G.P. No. 1 (15 ozs.)

This grease was introduced on Serial No. 660491, and should also be used when servicing Model A.700.

**Quantity supplied as follows:**

1 lb tins	—
7 lb "	62811
28 lb "	—

**KENWOOD MANUFACTURING (WOKING) LTD.**

**NEW LANE, HAVANT, HAMPSHIRE**

**APRIL 1961 (Issue 3)**

**Edition 1 / Amend 2 / Reprint 4 / March 1964**